involved in making the foodstuff need to be altered substantially to achieve the desired product in a shorter timeframe. The practitioner has to expend considerable time and effort gathering together a range of ingredients, some of which are irregularly used or are used in small quantities, thereby increasing costs and possibly risking ingredient spoilage and wastage. It has also been difficult to create premix formulations which can be used for a wide variety of applications.

It is an object of the present invention to go some way to avoiding the disadvantages described above or at least to provide the public with a useful choice.

SUMMARY OF INVENTION

In one aspect the method provides a method of preparing a dry premix comprising combining two or more of the following ingredients:

a) 5 to 60% w/w milk protein concentrate;

b) 5 to 90% w/w fat containing powder; and

c) at least one of the following:

i) 0 to 40% w/w sweetening agent;

ii) 0 to 25% w/w caseinate or rennet casein;

iii) 0 to 20% w/w lactose;

iv) 0 to 20% w/w lactose monohydrate;

v) 0 to 10% w/w acidulent;

vi) 0 to 10% w/w whey protein concentrate;

vii) 0 to 5% w/w whey protein isolate;

viii) 0 to 5% w/w phosphoric or citric acid salt, or a combination thereof;

ix) 0 to 5% w/w emulsifier;

x) 0 to 5% w/w flavouring agent;

xi) 0 to 5% w/w melting salt;

xii) 0 to 1% w/w preservative;

xiii) 0 to 1% w/w hydrocolloid or polysaccharide;

xiv) 0 to 1% w/w calcium chloride;

xv) 0 to 15% w/w caseinate; or

xvi) 0 to 15% w/w vegetable protein;

wherein %w/w is the percentage dry weight of the ingredient to the total dry weight of all the ingredients.

In a second aspect the invention provides a dry premix which may be reconstituted with a potable solvent to form a food product, said premix comprising:

a) 5 to 60% w/w milk protein concentrate;

b) 5 to 90% w/w fat containing powder, and

c) at least one of the following:

i) 0 to 40% w/w sweetening agent;

ii) 0 to 25% w/w caseinate or rennet casein;

iii) 0 to 20% w/w lactose;

iv) 0 to 20% w/w lactose monohydrate;

v) 0 to 10% w/w acidulent;

vi) 0 to 10% w/w whey protein concentrate;

vii) 0 to 5% w/w whey protein isolate;

viii) 0 to 5% w/w phosphoric or citric acid salt, or a combination thereof;

ix) 0 to 5% w/w emulsifier;

x) 0 to 5% w/w flavouring agent;

xi) 0 to 5% w/w melting salt;

xii) 0 to 1% w/w preservative;

xiii) 0 to 1% w/w hydrocolloid or polysaccharide;

xiv) 0 to 1% w/w calcium chloride;

xv) 0 to 15% w/w caseinate; or

xvi) 0 to 15% w/w vegetable protein;

wherein %w/w is the percentage dry weight of the ingredient to the total dry weight of all the ingredients.

Preferably the hydrocolloid or polysaccharide is selected from alginate, agar, locust bean gum, carageenan, guar, xanthan, pectin, agar, gelatin, modified cellulose or any combination thereof.

Preferably the acidulent is selected from glucono delta lactone (GDL), lactic acid, lactic anhydride, tartaric acid, citric acid, acetic acid or any combination thereof.

In a preferred embodiment, the fat containing powder is selected from cream powder, powdered fat, powdered vegetable fat or any combination thereof.

In a preferred method according to the invention at least one of the following compounds is added:

i) 3-45% w/w animal fat;

ii) 3-45% w/w vegetable fat, vegetable oil or any combination thereof;

iii) 1-30% w/w liquid sweetening agent;

iv) 0-15% w/w flavouring; or

v) 0-1% w/w colouring;

- wherein %w/w is the percentage weight of the compound to the total wet weight of the food product.

Preferably the compound includes anhydrous milk fat.

Preferably the liquid sweetening agent is selected from golden syrup, honey, corn syrup or any combination thereof.

Preferably 0 to 1% salt stabilised chymosin is added, wherein %w/w is the percentage dry weight of the chymosin to the total wet weight of the food product. In a preferred ambodiment the salt stabilised chymosin is added after a heating step.

Preferably 0-10% w/w viable food-grade strain of a bacterial culture is added, wherein %w/w is the percentage dry weight of the strain to the total wet weight of the food product. A preferred strain for use in the invention is grown and stabilised on skim milk powder. A particularly preferred viable food-grade strain of bacterial culture is freeze-dried or spray-dried lactic culture. Preferably the strain is added after an optional heating step.

Preferably the milk protein concentrate has a non-fat component, 40% to 90% of which is milk protein. More preferably 55% and 90% of the non-fat component of the milk protein concentrate is milk protein.

Most preferably about 56% of the non-fat component of the milk protein concentrate is milk protein. Alternatively about 70% of the non-fat component of the milk protein concentrate is milk protein. In another alternative about 85% of the non-fat component of the milk protein concentrate is milk protein.

Preferably the milk protein concentrate forms from about 3% to about 40% by weight of the wet food product.

Preferably the flavouring agent is selected from cheese-like flavour, meat-like flavour, fruit flavour, coffee flavour, caramel flavour, chocolate flavour, savoury flavour or any combination thereof.

Preferably the cream powder comprises about 35% to 85% fat.

Preferably the dry ingredients are in powder form.

In a third aspect invention provides a method of preparing a dry premix comprising combining two or more of the following ingredients:

a) 5 to 60% w/w dried skim milk cheese;

b) 5 to 90% w/w fat containing powder; and

c) at least one of the following:

i) 0 to 40% w/w sweetening agent;

ii) 0 to 25% w/w caseinate or rennet casein;

iii) 0 to 20% w/w lactose;

iv) 0 to 20% w/w lactose monohydrate;

v) 0 to 10% w/w acidulent;

vi) 0 to 10% w/w whey protein concentrate;

vii) 0 to 5% w/w whey protein isolate;

viii) 0 to 5% w/w phosphoric or citric acid salt, or a combination thereof;

ix) 0 to 5% w/w emulsifier;

x) 0 to 5% w/w flavouring agent;

xi) 0 to 5% w/w melting salt;

xii) 0 to 1% w/w preservative;

xiii) 0 to 1% w/w hydrocolloid or polysaccharide;

xiv) 0 to 1% w/w calcium chloride;

xv) 0 to 15% w/w caseinate; or

xvi) 0 to 15% w/w vegetable protein;

wherein %w/w is the percentage dry weight of the ingredient to the total dry weight of all the ingredients.

In a fourth aspect the invention provides a dry premix which may be reconstituted with a potable solvent to form a food product, said premix comprising:

a) 5 to 60% w/w dried skim milk cheese;

b) 5 to 90% w/w fat containing powder, and

c) at least one of the following:

i) 0 to 40% w/w sweetening agent;

ii) 0 to 25% w/w caseinate or rennet casein;

iii) 0 to 20% w/w lactose;

iv) 0 to 20% w/w lactose monohydrate;

v) 0 to 10% w/w acidulent;

Preferably the potable solvent is water. Alternatively the potable solvent is milk.

Preferably the fat containing powder is selected from cream powder, powdered fat, powdered vegetable fat or any combination thereof.

Preferably the emulsifier is selected from glycerol monostearate, lecithin or any combination thereof.

Preferably the flavouring agent is selected from cheese powder, enzyme modified cheese powder, cocoa, fruit flavour, savoury flavour or any combination thereof.

Preferably the preservative is selected from potassium sorbate, sorbic acid or its salts, propionic acid or its salts, benzoic acid or its salts, nisin, or any combination thereof.

Preferably the polysaccharide is selected from alginate, agar, locust bean gum, carageenan, guar, xanthan, pectin, agar, gelatin, modified cellulose or any combination thereof.

Preferably the methods according to the invention further comprise a cutting step.

Preferably the ingredients are combined in a mixing device.

Preferred food products made according to the invention include yoghurt, cheese, cheese spread, sweet spread, a nutrition bar, cream cheese, mousse, petite Suisse, sour cream, or cultured dairy products and their analogs.

In a particularly preferred embodiment the ingredients are kept in separate containers until mixed with other ingredients or the potable solvent. Preferably said containers are bags.

What we claim is:

1. A method of preparing a dry premix comprising combining two or more of the following ingredients:

a) 5 to 60% w/w milk protein concentrate;

b) 5 to 90% w/w fat containing powder; and

c) at least one of the following:

i) 0 to 40% w/w sweetening agent;

ii) 0 to 25% w/w caseinate or rennet casein;

iii) 0 to 20% w/w lactose;

iv) 0 to 20% w/w lactose monohydrate;

v) 0 to 10% w/w acidulent;

vi) 0 to 10% w/w whey protein concentrate;

vii) 0 to 5% w/w whey protein isolate;

viii) 0 to 5% w/w phosphoric or citric acid salt, or a combination thereof;

ix) 0 to 5% w/w emulsifier;

x) 0 to 5% w/w flavouring agent;

xi) 0 to 5% w/w melting salt;

xii) 0 to 1% w/w preservative;

xiii) 0 to 1% w/w hydrocolloid or polysaccharide;

xiv) 0 to 1% w/w calcium chloride;

xv) 0 to 15% w/w caseinate; or

xvi) 0 to 15% w/w vegetable protein;

wherein %w/w is the percentage dry weight of the ingredient to the total dry weight of all the ingredients.

2. A dry premix prepared according to the method of claim 1.

3. A dry premix which may be reconstituted with a potable solvent to form a food product, said premix comprising:

a) 5 to 60% w/w milk protein concentrate;

b) 5 to 90% w/w fat containing powder, and

c) at least one of the following:

i) 0 to 40% w/w sweetening agent;

ii) 0 to 25% w/w caseinate or rennet casein;

iii) 0 to 20% w/w lactose;

iv) 0 to 20% w/w lactose monohydrate;

v) 0 to 10% w/w acidulent;

vi) 0 to 10% w/w whey protein concentrate;

vii) 0 to 5% w/w whey protein isolate;

viii) 0 to 5% w/w phosphoric or citric acid salt, or a combination thereof;

ix) 0 to 5% w/w emulsifier;

x) 0 to 5% w/w flavouring agent;

xi) 0 to 5% w/w melting salt;

xii) 0 to 1% w/w preservative;

xiii) 0 to 1% w/w hydrocolloid or polysaccharide;

xiv) 0 to 1% w/w calcium chloride;

xv) 0 to 15% w/w caseinate; or

xvi) 0 to 15% w/w vegetable protein;

wherein %w/w is the percentage dry weight of the ingredient to the total dry weight of all the ingredients.

4. A method for producing a food product wherein ingredients a) to c) defined in claim 3 are mixed with said potable solvent.

5. A method according to claim 4 wherein ingredients a) to c) are mixed together in a dry state before mixing with said potable solvent.

6. A method according to claim 4 wherein one or more of ingredients a) to c) are mixed with said potable solvent before being mixed with each other.

7. A method according to any one of claims 4 to 6 wherein the weight:weight ratio of potable solvent to dry ingredients is between 2.5:1 and 1:2.5

8. A method according to any one of claims 4 to 7 wherein the method includes a heating step during or after combination of the dry ingredients with the potable solvent.

9. A method according to claim 8 wherein the potable solvent and ingredients are heated to between about 50 and 90 degrees Celsius.

10. A method according to claim 9 wherein the potable solvent and ingredients are heated to between about 60 and 90 degrees Celsius.

11. A method according to claim 9 wherein the potable solvent and ingredients are heated to between about 70 and 90 degrees Celsius.

12. A method according to any one of claims 4 to 11 wherein the method includes a cooling step subsequent to the heating step.

13. A method according to any one of claims 4 to 12 wherein the potable solvent is water.

14. A method according to any one of claims 4 to 12 wherein the potable solvent is milk.

15. A method according to any one of claims 4 to 14 wherein the emulsifier includes a lipid or phospholipid derived agent.

16. A method according to claim 15 wherein the emulsifier is selected from commercial glycerol stearate, a lecithin based formulation, or any combination thereof.

17. A method according to any one of claims 4 to 16 wherein the flavouring agent is selected from cheese powder, enzyme modified cheese powder, cocoa, coffee, caramel, fruit flavour, savoury flavour, or any combination thereof.

18. A method according to any one of claims 4 to 17 wherein the preservative is selected from sorbic acid or its salts, propionic acid or its salts, benzoic acid or its salts, nisin, or any combination thereof.

19. A method according to any one of claims 4 to 18 wherein the hydrocolloid or polysaccharide is selected from alginate, agar, locust bean gum, carageenan, guar, xanthan, pectin, agar, gelatin, modified cellulose or any combination thereof.

20. A method according to any one of claims 4 to 19 wherein the acidulent is selected from glucono delta lactone (GDL), lactic acid, lactic anhydride, tartaric acid, citric acid, acetic acid or any combination thereof.

21. A method according to any one of claims 4 to 20 wherein the fat containing powder is selected from cream powder, powdered fat, powdered vegetable fat or any combination thereof.

22. A method according to any one of claims 4 to 21 wherein at least one of the following compounds is added:

i) 3-45% w/w animal fat;

ii) 3-45% w/w vegetable fat, vegetable oil or any combination thereof;

iii) 1-30% w/w liquid sweetening agent;

iv) 0-15% w/w flavouring; or

v) 0-1% w/w colouring;

- wherein %w/w is the percentage weight of the compound to the total wet weight of the food product.

23. A method according to claim 22 wherein the compound includes anhydrous milk fat.

24. A method according to any one of claims 22 or 23 wherein the liquid sweetening agent is selected from golden syrup, honey, corn syrup or any combination thereof.

25. A method according to any one of claims 4 to 24 wherein 0 to 1% salt stabilised chymosin is added, wherein %w/w is the percentage dry weight of the chymosin to the total wet weight of the food product.

26. A method according to claim 25 when dependent from claim 8 wherein the salt stabilised chymosin is added after a heating step.

27. A method according to any one claims 4 to 26 wherein 0-10% w/w viable food-grade strain of a bacterial culture is added, wherein %w/w is the percentage dry weight of the strain to the total wet weight of the food product.

28. A method according to claim 27 wherein the strain has been grown and stabilised on skim milk powder,

29. A method according to any one of claims 27 or 28 wherein said viable food-grade strain of bacterial culture is freeze-dried or spray-dried lactic culture.

30. A method according to claim 29 when dependent from claim 8 wherein the strain is added after the heating step.

31. A method according to any one of claims 4 to 30 wherein the milk protein concentrate has a non-fat component, 40% to 90% of which is milk protein.

32. A method according to claim 31 wherein between 55% and 90% of the non-fat component of the milk protein concentrate is milk protein.

33. A method according to claim 32 wherein about 56% of the non-fat component of the milk protein concentrate is milk protein.

34. A method according to claim 32 wherein about 70% of the non-fat component of the milk protein concentrate is milk protein.

35. A method according to claim 32 wherein about 85% of the non-fat component of the milk protein concentrate is milk protein.

36. A method according to any one of claims 4 to 35 wherein the milk protein concentrate forms from about 3% to about 40% by weight of the wet food product.

37. A method according to any one of claims 4 to 36 wherein the flavouring agent is selected from cheese-like flavour, meat-like flavour, fruit flavour, coffee flavour, caramel flavour, chocolate flavour, savoury flavour or any combination thereof.

38. A method according to any one of claims 21 to 37 wherein the cream powder comprises about 35% to 85% fat.

39. A method according to any one claims 4 to 38 wherein the dry ingredients are in powder form.

40. A method of preparing a dry premix comprising combining two or more of the following ingredients:

a) 5 to 60% w/w dried skim milk cheese;

b) 5 to 90% w/w fat containing powder; and

c) at least one of the following:

i) 0 to 40% w/w sweetening agent;

ii) 0 to 25% w/w caseinate or rennet casein;

iii) 0 to 20% w/w lactose;

iv) 0 to 20% w/w lactose monohydrate;

v) 0 to 10% w/w acidulent;

vi) 0 to 10% w/w whey protein concentrate;

vii) 0 to 5% w/w whey protein isolate;

viii) 0 to 5% w/w phosphoric or citric acid salt, or a combination thereof;

ix) 0 to 5% w/w emulsifier;

x) 0 to 5% w/w flavouring agent;

xi) 0 to 5% w/w melting salt;

xii) 0 to 1% w/w preservative;

xiii) 0 to 1% w/w hydrocolloid or polysaccharide;

xiv) 0 to 1% w/w calcium chloride;

xv) 0 to 15% w/w caseinate; or

xvi) 0 to 15% w/w vegetable protein;

wherein %w/w is the percentage dry weight of the ingredient to the total dry weight of all the ingredients.

41. A dry premix prepared according to the method of claim 40.

42. A dry premix which may be reconstituted with a potable solvent to form a food product, said premix comprising:

a) 5 to 60% w/w dried skim milk cheese;

b) 5 to 90% w/w fat containing powder, and

c) at least one of the following:

i) 0 to 40% w/w sweetening agent;

ii) 0 to 25% w/w caseinate or rennet casein;

iii) 0 to 20% w/w lactose;

iv) 0 to 20% w/w lactose monohydrate;

v) 0 to 10% w/w acidulent;

vi) 0 to 10% w/w whey protein concentrate;

vii) 0 to 5% w/w whey protein isolate;

viii) 0 to 5% w/w phosphoric or citric acid salt, or a combination thereof;
ix) 0 to 5% w/w emulsifier;
x) 0 to 5% w/w flavouring agent;
xi) 0 to 5% w/w melting salt;
xii) 0 to 1% w/w preservative;
xiii) 0 to 1% w/w hydrocolloid or polysaccharide;
xiv) 0 to 1% w/w calcium chloride;
xv) 0 to 15% w/w caseinate; or
xvi) 0 to 15% w/w vegetable protein;

wherein %w/w is the percentage dry weight of the ingredient to the total dry weight of all the ingredients.

43. A method for producing a food product wherein ingredients a) to c) defined in claim 42 are mixed with said potable solvent.

44. A method according to claim 43 wherein ingredients a) to c) are mixed together in a dry state before mixing with said potable solvent.

45. A method according to claim 43 wherein one or more of ingredients a) to c) are mixed with said potable solvent before being mixed with each other.

46. A method according to any one of claims 42 to 44 wherein the weight:weight ratio of potable solvent to dry ingredients is between 2.5:1 and 1:2.5

47. A method according to any one of claims 42 to 46 wherein the method includes a heating step during or after combination of the dry ingredients with the potable solvent.

48. A method according to claim 47 wherein the potable solvent and ingredients are heated to between about 50 and 90 degrees Celsius.

49. A method according to claim 48 wherein the potable solvent and ingredients are heated to between about 60 and 90 degrees Celsius.

50. A method according to claim 48 wherein the potable solvent and ingredients are heated to between about 70 and 90 degrees Celsius.

51. A method according to any one of claims 42 to 50 wherein the method includes a cooling step subsequent to the heating step.

52. A method according to any one of claims 42 to 51 wherein the potable solvent is water.

53. A method according to any one of claims 42 to 51 wherein the potable solvent is milk.

54. A method according to any one of claims 42 to 53 wherein the fat containing powder is selected from cream powder, powdered fat, powdered vegetable fat or any combination thereof.

55. A method according to claim 54 wherein the emulsifier is selected from glycerol monostearate, lecithin or any combination thereof.

56. A method according to any one of claims 42 to 55 wherein the flavouring agent is selected from cheese powder, enzyme modified cheese powder, cocoa, fruit flavour, savoury flavour or any combination thereof.

57. A method according to any one of claims 42 to 56 wherein the preservative is selected from potassium sorbate, sorbic acid or its salts, propionic acid or its salts, benzoic acid or its salts, nisin, or any combination thereof.

58. A method according to any one of claims 42 to 57 wherein the polysaccharide is selected from alginate, agar, locust bean gum, carageenan, guar, xanthan, pectin, agar, gelatin, modified cellulose or any combination thereof.

59. A method according to any one of claims 4 to 39 or 42 to 58 wherein the method further comprises a cutting step.

60. A method according to any one claims 4 to 39 or 42 to 59 wherein the ingredients are combined in a mixing device.

61. A method according to any one 4 to 39 or 42 to 60 wherein the food product is selected from yoghurt, cheese, cheese spread, sweet spread, a nutrition bar, cream cheese, mousse, petite Suisse, sour cream, or cultured dairy products and their analogs.

62. A food product made by a method of any one of claims 4 to 39 or 42 to 61.

63. A method according to any one of claims 4 to 39 or 42 to 61 wherein the ingredients are kept in separate containers until mixed with other ingredients or the potable solvent.

64. A method according to claim 63 wherein said containers are bags.